REMARKS

Interview Request

Applicants are attempting to resolve all outstanding issues after this long drawn out expensive prosecution. If any issues remain unresolved after this response, applicants courteously request that the Examiner grant applicants an in person interview to discuss any outstanding issues. Applicants also request the presence of a supervisor at any such interview. An interview request form is attached.

The Examiner is requested to contact the undersigned via telephone in case any rejections/issues remain unresolved to set up an interview.

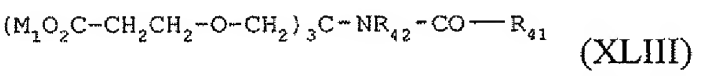
Rejection against claims 18 and 50 with regard to the wording "*a bridging group of the monovalent radical R_{41}*".

Claim 50 is cancelled without prejudice or disclaimer.

Discussion of grounds for rejection for claim 18:

First an excerpt from the description starting at the bottom of page 30:

"A further preferred group of water-soluble diphosphines are those of formula XLIII,

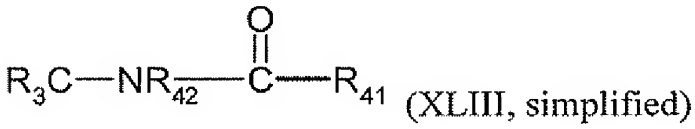


$(M_1O_2C-CH_2CH_2-O-CH_2)_3C-NR_{42}-CO-R_{41}$ (XLIII)

in which M_1 stands for H, an alkali metal cation or an ammonium cation, R_{42} denotes C_1-C_4 alkyl and preferably H, and R_{41} is the monovalent radical of a chiral ditertiary diphosphine, the CO group being directly attached to a carbon or nitrogen atom of the diphosphine skeleton, or to an oxygen or nitrogen atom or to a carbon atom of a bridging group of the diphosphine skeleton. Examples of suitable bridging groups include -O-, -NH-, C_1-C_6-alkylene-, -N(C_1-C_4-alkyl)-, -O-C_1-C_6-alkylene-, -NH-C_1-C_6-alkylene- and -N(C_1-C_4-alkyl)-C_1-C_6-alkylene-. For M_1 the embodiments and preferences stated earlier apply."

Said excerpt reads shortened and with emphasize on R_{41} and the given alternative:

"A further preferred group of water-soluble diphosphines are those of formula XLIII,



(XLIII, simplified)

in which

...

R_{41} is the monovalent radical of a chiral ditertiary diphosphine,

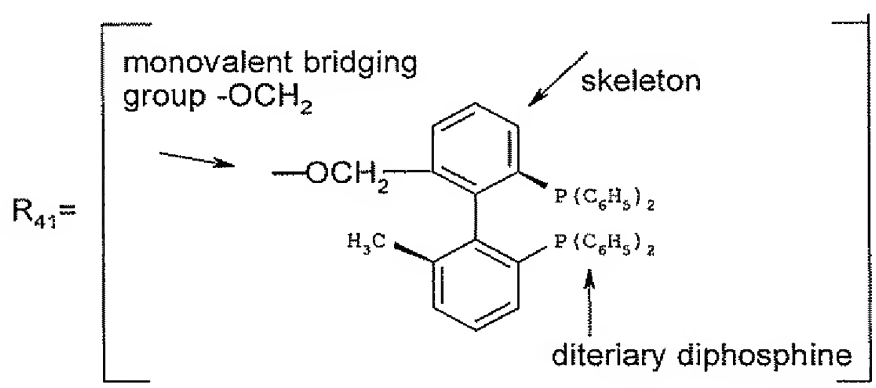
the CO group being attached directly

a) to a carbon or nitrogen atom of the diphosphine skeleton, or

b) to an oxygen or nitrogen atom or to a carbon atom of a bridging group of the diphosphine skeleton."

Two examples should illustrate the possible alternatives as follows:

First an example for variant b), taken from preferred examples as mentioned on page 31, namely the C(O)-group being directly attached to an (in this example) oxygen of a bridging group of the diphosphine skeleton:

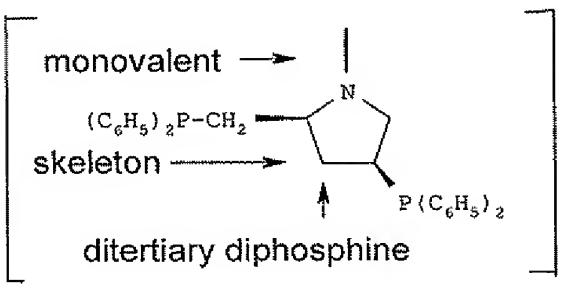


R_{41} is monovalent as it is bound directly (thus monovalent) to the C(O)-group.

Both phosphines of the diphosphine are tertiary, thus we have a ditertiary diphosphine.

We have a bridging group [here -O-CH_2-] as the C(O)-group is not directly attached to the skeleton of the diphosphine.

Second an example for variant a), also taken from preferred examples as mentioned on page 31, namely the C(O)-group being directly attached to an (in this example) nitrogen atom of the diphosphine skeleton:

R_{41} = 

In summary, R_{41} is a monovalent radical, the radical comprises a monovalent skeleton bearing two phosphine groups, thus bearing in short "a diphosphine", the skeleton is a) either directly attached to the C(O)-group, or, b) attached via a bridging group to the C(O)-group.

We can further mention that the corresponding European application has already been granted as EP 1 200 437 B1. While the text is in German we can see from the English portion of the claims that granted claim 18 also contains the terms "monovalent" and "bridging group".

However, please note that the wording used in claim 18 of EP 1 200 437 B1 is different from the wording of instant claim 18, as instead of "monovalent radical" is used "diphosphine skeleton" and therefore follows the wording used in the description on page 30.

Claim 18 (page 39) of EP 1 200 437 B1 reads:

18. Method according to claim 17, **characterised in that** diphosphines for an aqueous reaction medium are ones of formula XLIII

$$(M_1O_2C\text{-}CH_2CH_2\text{-}O\text{-}CH_2)_3C\text{-}NR_{42}\text{-}CO\text{-}R_{41} \qquad \text{(XLIII)}$$

in which M_1 stands for H, an alkali metal cation or an ammonium cation, R_{42} denotes C_1-C_4 alkyl and preferably H, and R_{41} is the monovalent radical of a chiral ditertiary diphosphine, with the CO group being attached directly to a C or N atom of the diphosphine skeleton, or to an O or N atom or to a C atom of a bridging group of the diphosphine skeleton.

In view of the above detailed discussion, the wording of said claim is thus considered as being correct and easy to understand.

In view of the above, claim 18 is amended to further clarify the same in a consistent manner with the description in the specification.

Rejection against claim 43 with regard to the wording "*heterocycloaliphatic*".

a) The previously added "wherein clause" at the end of the claim 43 is deleted. As a consequence, the "new matter" objection is obsolete.

b) The Examiner states (page 4, line 6): "Now applicants point to page 12, paragraphs 1 and 3, "when read together." This is of no avail."

The above allegations and what follows on page 4 of the Office Action is however not in accord with standard USPTO practice.

See *In re Morris*, 44 USPQ2d 1023 (Fed. Cir. 1997) holding that

"the PTO applies to the verbiage of the proposed claims the broadest **reasonable** meaning of the words in their **ordinary usage** as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant's specification." (Emphasis added.)

Also see *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983) holding that

"claims are not to be read in vacuum, and limitations in them are to be interpreted in light of specification in giving them their broadest reasonable interpretation." (Emphasis added.)

The Office Action appears to ignore the specification and the ordinary meaning of the term used as it would be understood by those of ordinary skill in the art, and merely takes a position inconsistent with how one of ordinary skill in the art would interpret the term in question as it recites various unreasonable interpretations. However, such is not how the USPTO should interpret claims, as evident from the cases cited above. Even though the interpretation should be broad, it should nevertheless be **reasonable**.

The specification on paragraph 1 on page 12 reads:

"The heterohydrocarbon radical may be heteroalkyl with 2 to 16 carbon atoms, preferably 2 to 10 carbon atoms, and most preferably 2 to 6 carbon atoms; heterocycloaliphatic radicals with 3 to 8, preferably 5 or 6 ring links; heterocycloaliphatic-aliphatic radicals with 3 to 8, preferably 5 or 6 ring links, and 1 to 6, preferably 1 to 4 carbon atoms in the aliphatic radical; heteroaromatic radicals with preferably 4 to 13 carbon atoms, most preferably 4 to 9 carbon atoms, and at least one heteroatom; and heteroaromatic-aliphatic radicals with preferably 4 to 13 carbon atoms, most preferably 4 to 9 carbon atoms, and at least one heteroatom, and 1 to 6, preferably 1 to 4 carbon atoms in the aliphatic radical; the heteroradicals contain at least one heteroatom selected from the group comprising -O-, -S- and -N- and preferably -O- and -N-."

Transposed it reads:

The

1) **heterohydrocarbon** radical may be
   2) **heteroalkyl** with 2 to 16 carbon atoms, preferably 2 to 10 carbon atoms, and most preferably 2 to 6 carbon atoms;
   3) **heterocycloaliphatic** radicals with 3 to 8, preferably 5 or 6 ring links;
   4) **heterocycloaliphatic-aliphatic** radicals with 3 to 8, preferably 5 or 6 ring links, and 1 to 6, preferably 1 to 4 carbon atoms in the aliphatic radical;
   5) **heteroaromatic** radicals with preferably 4 to 13 carbon atoms, most preferably 4 to 9 carbon atoms, and at least one heteroatom; and
   6) **heteroaromatic-aliphatic** radicals with preferably 4 to 13 carbon atoms, most preferably 4 to 9 carbon atoms, and at least one heteroatom, and 1 to 6, preferably 1 to 4 carbon atoms in the aliphatic radical;

7) the **heteroradicals [of a) to e)]** contain at least one heteroatom selected from the group comprising -O-, -S- and -N- and preferably -O- and -N-.

First "*hetero*" is a prefix (Greek).
Second "*hetero*" indicates unlikeness or difference etc.
Third e.g. "*hetero*cylic" pertains to dissimilar atoms in a ring.

Conclusively "*hetero*" is also the prefix for e.g. "cycloaliphatic" and if no different definition is explicitly given, "hetero" should be interpreted in its usual way, namely that "*hetero*cycloaliphatic" is a cycloaliphatic radical having heteroatoms in the ring.

Thus the "examples" or "interpretations" of the Examiner given in the last paragraph on page 3 of the Office Action are simply construed in an unreasonable manner which is not how one of ordinary skill in the art would understand the meaning of this term.

Applicants also bring the attention of the Examiner to granted US 7,122,556 B1, wherein the use of "heterocycloaliphatic" seems not having constituted a bar to patentability, which further demonstrates that this term is well known in the art.

F) Rejection against claims 14, 17-19, 30, 35-36, 38-39, 41 with regard to the wording *"diphosphine, having (two) tertiary phosphine groups which contain two identical or different, identical unsubstituted or substituted hydrocarbon radicals with 1 to 20 carbon atoms".*

The claims rejected were amended back to their previous form, e.g. claim 14 was amended as follows:

"14. ...ligand that is an achiral or chiral ditertiary disphosphine~~, having tertiary phosphine groups which contain two identical or different, identical unsubstituted or substituted hydrocarbon radicals with 1 to 20 carbon atoms~~ or a compound of the ..."

Applicants amended the claims previously in efforts to appease the Examiner, but in view of the rejections, the previous claim language is re-established as applicants believe that the previous term is clear and well understood by those of ordinary skill in the art for reasons of record already. See also the examples given above regarding claim 18, wherein ditertiary diphosphines were exemplified and discussed.

So as to build a record for additional review, applicants request a thorough explanation finds these well known terms in the art to be unacceptable (e.g. see WO 2006/108562, page 6, line 9 "ditertiary diphosphines are well known in numerous examples and described in the literature") and which further are accepted at the USPTO, see e.g. US 5,912,376, col. 2, lines 2+3 etc. Under the controlling law, which is discussed above, the USPTO should interpret claim language in a reasonable manner consistent with how one or ordinary skill in the art would interpret such terms.

Applicants further mention that the corresponding European application has already been granted as EP 1 200 437 B1. While the text is in German we can see from the English portion of the claims that both "ditertiary diphosphines" (see claims 14, 15, and 18 below), as evidence that the EPO accepted the wording "ditertiary diphosphines".

Claims 14, 15 (page 37) and 18 (page 39) of EP 1 200 437 B1 read:

14. Method according to claim 1, **characterised in that** the metal complex contains achiral or chiral ditertiary diphosphines as ligands.

15. Method according to claim 14, **characterised in that** the ditertiary disphosphines for an alcohol reaction medium are ones in which the phosphine groups are attached (a) to different carbon atoms of a carbon chain having 2 to 4 carbon atoms, or (b) directly or via a bridging group $-CR_aR_b-$ in the orthopositions of a cyclopentadienyl ring or to a respective cyclopentadienyl of a ferrocenyl, R_a and R_b being the same or different and standing for H, C_1-C_8 alkyl, C_1-C_4 fluoroalkyl, C_5-C_6 cycloalkyl, phenyl, benzyl, or for phenyl or benzyl substituted with 1 to 3 C_1-C_4 alkyl or C_1 to C_4 alkoxy.

Reconsideration is respectfully requested.

Additional Comments

Allowed claim 48 depends on rejected claim 19.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

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